



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

MAR 8 2000

400 Seventh Street, S.W.  
Washington, D.C. 20590

DOT-E 11990  
(THIRD REVISION)

EXPIRATION DATE: February 2, 2002

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Taylor-Wharton Coyne  
Huntsville, Alabama
2. PURPOSE AND LIMITATION:
  - a. This exemption authorizes the manufacture, mark, sale and use of non-DOT specification oil well sampling cylinders conforming with all regulations applicable to a DOT Specification 3A cylinder, except as specified herein, for the transportation in commerce of the materials authorized by this exemption. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
  - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302 in that a non-DOT specification cylinder is authorized.
5. BASIS: This exemption is based on the application of Taylor-Wharton Coyne dated January 19, 2000, submitted in accordance with 49 CFR 107.109.

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6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi- fication Number	Packing Group
Helium, compressed	2.2	UN1046	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A
Liquefied petroleum gas	2.1	UN1075	N/A
Natural gas, compressed	2.1	UN1971	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Petroleum crude oil	3	UN1267	I, II, or III

7. PACKAGING AND SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification oil well sampling cylinder, constructed from seamless stainless steel tubing, with a flanged flat head threaded end closure at one end. The other end is a machined flat head as an integral part of the cylinder. Each cylinder must comply with Taylor-Wharton Coyne drawings submitted with the original application or Taylor-Wharton Coyne drawing numbers 5860424-00, Rev.2, 586042-01, Rev.2, 586042-02, and 586042-03 on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA), 49 CFR 178.35, and with the DOT 3A specification (§178.36) except as follows:

§ 178.35(e) *Safety devices*

Cylinders must be equipped with a pressure relief device that will relieve pressure when subjected to a pool fire. The pressure relief device includes a rupture disc with a design burst pressure of 35,000 psig.

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§ 178.35(f) *Markings*

(1) \* \* \*

(i) Cylinders must be marked "DOT-E 11990" in lieu of "DOT-3A" followed by the service pressure.

\* \* \*

§ 178.36(a) *Type, size, and service pressure*

The maximum water capacity must not exceed 1,200 cc. The maximum service pressure must not exceed 20,000 psig.

§ 178.36(b) *Steel*

Armco 17-4PH stainless steel double heat treated at 1150°F. Material must meet the requirements of the National Association of Corrosion Engineers (NACE) Specification MR-01-75 for suitability in hydrogen sulfide(H<sub>2</sub>S) service.

§ 178.36(f) *Wall thickness*

The minimum wall thickness must be 0.870 inch. \* \*

§ 178.36(g) *Heat treatment*

No heat treatment is required for the completed cylinder.

§ 178.36(j) *Flattening test*

The flattening test is not required.

§ 178.36(l) *Acceptable results for physical tests*

Minimum Tensile strength:	120,000 psi
Minimum Yield strength:	100,000 psi
Elongation:	20% on 2 inch gauge specimen

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b. TESTING - Each cylinder must be reinspected and hydrostatically retested in accordance with § 173.34(e) as prescribed for DOT 3A specification cylinders. Reheat treatment or repair of rejected cylinders is not permitted.

c. OPERATIONAL CONTROLS -

(1) Each cylinder must be overpacked for shipment in accordance with § 173.301(k).

(2) Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the cylinders are not fitted with pressure relief devices and provide appropriate guidance in case the cylinders are exposed to fire.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this exemption for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this exemption.

b. A person who is not a holder of this exemption, but receives a package covered by this exemption, may reoffer it for transportation provided no modifications or changes are made to the package and it is offered for transportation in conformance with this exemption and the HMR.

c. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this exemption must be marked with a registration symbol designated by the Office of Hazardous Materials Exemptions and Approvals for a specific manufacturing facility.

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- e. A current copy of this exemption must be maintained at each facility where the package is manufactured under this exemption. It must be made available to a DOT representative upon request.
- f. The cylinders are authorized for oil well sampling service only.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo only aircraft.
10. MODAL REQUIREMENTS: A copy of this exemption must be carried aboard each cargo vessel or aircraft used to transport packages covered by this exemption. The shipper shall furnish a copy of this exemption to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, Parts 171-180.
  - o Registration required by § 107.601 et seq., when applicable.
- Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.
- No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.
12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this

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exemption.) In addition, the holder(s) of this exemption must also inform the AAHMS, in writing, as soon as practicable of any incidents involving the package and shipments made under this exemption.

Issued at Washington, D.C.:



for Robert A. McGuire  
Acting Associate Administrator  
for Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for  
Hazardous Materials Safety, Research and Special Programs  
Administration, Department of Transportation, Washington, D.C.  
20590.

Attention: DHM-31.

The original of this exemption is on file at the above office.  
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Dist: FHWA, FRA, FAA, USCG  
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